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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,896

08/16/2006

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1278-15

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03/11/2010

EXAMINER

BADR, HAMID R

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/11/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,896	Applicant(s) WALDOCK, CLINTON SCOTT	
	Examiner HAMID R. BADR	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' amendment filed 12/16/2009 is acknowledged.

Claims 1-18 are being considered on the merits.

Claim Objection

1. Applicant is advised that should claim 1 be found allowable, claim 17 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNamee et al. (GB 2,291,578; hereinafter R1) in view of Pasternak (US 4,670,271; hereinafter R2).

3. R1 discloses a method for making baked products. R1 discloses a method for applying an edible marking substance to a portion of the surface of the product prior to baking. (Abstract)

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4. R1 discloses that the product is then baked so that a differential surface coloration is developed at the position of and as a consequence of the application of the marking substance. R1 discloses that the marking substance comprises sugar, proteins and aqueous or organic carriers. (page 2 line 27 to page 3 line 4).

5. R1 discloses that the marking substance may be applied to the crust by direct application for example with a brush, or by spraying, by stencil. (End page 3 to top page 4).

6. R1 also discloses that the marking material should be in a liquid form and will comprise sugar, starch or protein or mixtures thereof and the carrier may be aqueous or organic medium, the latter is preferably alcohol. (page 4, lines 15-24) Therefore, using an edible material such as ethanol as presently claimed would be obvious.

7. while R1 discloses the marking materials and also methods of applying the marking substances onto the dough surface before baking the product, R1 is silent regarding the edible inks comprising the components as presently claimed.

8. R2 discloses an edible ink to be used for printing on foodstuffs consisting of water (20-60%), glycerol (5-25%), propylene glycol (10-35%), sucrose (1-5%), corn syrup (1-5%), titanium dioxide (5-35%), and food coloring (less than 1%). (Col. 16, lines 40-60).

9. It is also noted that the ranges as disclosed by R2 and as presently claimed overlap. It is also noted that the chemical entities, as disclosed by R2, are basically the entities as presently claimed.

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10. R2 discloses examples of food colorings which can be incorporated into the edible ink. FDC yellow no. 5 and FDC red no. 3 are given as examples. (Col. 16, lines 60-61). Given that food colorings can be incorporated into the edible ink, It would be obvious to incorporate the dyes and pigments as presently claimed in the edible ink.

11. Since R2 discloses a formulation consisting of low surface tension materials, it would be obvious to apply it to surfaces such as surface of a dough and being of low surface tension, the ink beading will be prevented.

12. While R2 discloses electronic means of applying the ink on the surface of foodstuffs, it would be obvious to use manual stamps, mechanical stamps, stencil spraying, ink jet printer as presently claimed.

13. Given that R2 teaches of an ink formulation comprising ranges of materials which clearly overlap the presently claimed ranges, it would be obvious to those of skill in the art to change the component ranges depending on the type of the coloring material and the solubility of a specific dye in the carrier system. The modification of the base formulation for optimum results is within the skill of the art.

14. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to follow the teachings of R1 to apply an edible ink to the surface of a dough before baking and optimize the components of the edible ink, as taught by R2, to create low surface tension inks with minimal ink beading on dough surface. One would do so to be able to apply food coloring of various hues and physical properties to the surface of baked products for marking them. Absent any evidence to contrary and based on the teachings of the cited reference, there would be a

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reasonable expectation of success in formulating an edible ink to be applied to the surface of bakery products.

15. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNamee et al. (GB 2,291,578; hereinafter R1) in view of Croker et al. (US 5,711,791; hereinafter R3)

16. R1 discloses a method for making baked products. R1 discloses a method for applying an edible marking substance to a portion of the surface of the product prior to baking. (Abstract)

17. R1 discloses that the product is then baked so that a differential surface coloration is developed at the position of and as a consequence of the application of the marking substance. R1 discloses that the marking substance comprises sugar, proteins and aqueous or organic carriers. (page 2 line 27 to page 3 line 4).

18. R1 discloses that the marking substance may be applied to the crust by direct application for example with a brush, or by spraying, by stencil. (End page 3 to top page 4).

19. R1 also discloses that the marking material should be in a liquid form and will comprise sugar, starch or protein or mixtures thereof and the carrier may be aqueous or organic medium, the latter is preferably alcohol. (page 4, lines 15-24) Therefore, using an edible material such as ethanol as presently claimed would be obvious.

20. while R1 discloses the marking materials and also methods of applying the marking substances onto the dough surface before baking the product, R1 is silent regarding the edible inks comprising the components as presently claimed.

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21. R3 discloses ink jet inks comprising liquid vehicles being a blend of water and ethanol, a binder comprising sugar or sugar alcohol, a colorant and a surfactant which is soluble in the liquid vehicle. (Abstract).

22. R3 discloses the role of the binder (col. 3, lines 45-47), the liquid vehicle including water and C1-C5 alcohols, (col. 4, lines 1-3), the coloring agent being food grade (col. 4, lines 4-8).

23. R3 discloses the range of the binder to be 1-20%, the coloring matter range of 0.1-15%, the liquid carrier range of 65-95%. (Col. 4, lines 14-23). The composition may also contain conductivity controller, e.g. an ionizable compound such as sodium chloride for ink jet printing. (Col. 4, 24-26). Given that the liquid carrier as disclosed by R3 can include water and ethanol, the range of liquid carrier as disclosed by R3 encompasses the presently claimed range of the liquid carrier (solvent 10-60, water 1-55).

24. R3 discloses various coloring compounds which can be used in the composition. (Col. 3, lines 5-40)

25. R3 gives numerous examples of the coloring matter (Col. 10, Table 3A). R3 gives examples of the inks in Examples 5-12. The coloring matter disclosed by R3 include those coloring matters as presently claimed.

26. While R3 discloses the inclusion of polyhydric alcohols which act as humectants in the ink preparations, replacement of such compounds with a plasticizer/humectant such as glycerol would have been obvious to an artisan because glycerol is a polyhydric

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edible alcohol. One would choose glycerol for a lower surface tension in the preparation as presently claimed.

27. Application of the ink formulations by stamps, ink jets, stencil spraying etc, as presently claimed, would be obvious to an artisan.

28. It is noted that R3 formulations are able to print on hydrophobic surfaces for instance chocolate substitutes (col. 3, lines 1-3). However, modification of the compositions disclosed by R3 to make low surface tension formulations as presently claimed would have been within the skill in the art. Such modifications will enable one to print on surfaces such as a dough before baking as presently claimed.

29. Various combinations of the ink components, as presently claimed, would have been obvious to an artisan depending on the physical properties of different coloring materials.

30. Since the application of marking materials to the surface of unbaked dough is disclosed by R1 and the components of marking materials and their roles in the composition are explained in detail by R3, it would have been obvious to one ordinary skill in the art, at the time the invention was made to follow the teachings of R1 and optimize the components of the edible ink, as taught by R3, for the intended use. One would do so to be able to apply food coloring of various hues and physical properties to the surface of the unbaked products for marking them. Absent any evidence to contrary and based on the teachings of the cited reference, there would be a reasonable expectation of success in formulating an edible ink to be applied to the surface of bakery products.

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31. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNamee et al. (GB 2,291,578; hereinafter R1) in view of Errera (US 2004/0040446; hereinafter R4).

32. Disclosure by R1 is hereby incorporated by reference as outlined above.

33. R1 is silent regarding the design of a stamping device for marking baked products.

34. R4 discloses a stamping device with basically similar features as presently claimed.

35. Therefore, it would have been obvious to design a stamping device, as disclosed by R4) to be used in marking the dough before baking as taught by R1.

Response to Arguments

Applicants' arguments have been thoroughly reviewed. These arguments are not deemed persuasive for the following reasons.

1. Applicants argue that it has been surprisingly found by altering solvent, glycerol and water content bleeding by the ink can be avoided.

a. The results are not surprising and are expected because the range of ingredients as disclosed by the references overlap the presently claimed ranges. On the other hand, those of skill in the art know the polar properties of water and glycerol and ethanol, therefore, optimizing the formulation for a desired result would be within the skill of the art.

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2. Applicants argue that without glycerol the dye pigment dries out in the form of powder during baking.

a. Use of glycerol in formulations comprising coloring materials and its concentration range are disclosed by R2. Manipulation of concentrations for certain optimum results is within the skill of the art.

3. Applicants argue that R1, does not disclose the ink components as presently claimed.

a. It is agreed that R1 does not disclose ink components as presently claimed. This has been also spelled out in the Office action under rejections involving R1.

4. Applicants argue that R2 does not apply the inks to unbaked products.

a. Applying marking materials to dough before baking is disclosed by R1. R2 discloses edible inks having component and component ranges which overlap the presently claimed ranges, therefore, R2 meets the requirements of the claims as presently claimed. Therefore, regarding the edible ink formulations, R2 does not teach away from the presently claimed invention.

5. Applicants argue that R3 discloses inks which are not applied to foodstuffs to be subsequently baked.

a. R3 is used as a teaching reference, and as such it does not have to disclose all features of the primary reference. Furthermore, R3 discloses the inclusion of polyhydric alcohols in edible inks. Therefore, inclusion of glycerol, being an edible polyhydric alcohol into edible inks, would have been obvious to those of skill in the art. On the

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other hand, glycerol is a polar substance which reduces the surface tension in formulations containing it. This is also known in the art.

Conclusion

36. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1794

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1794